



February 21, 2024

## **Executive Summary Fourth Quarter 2023**

Arkansas Public Employees  
Retirement System

---

**Brianne Weymouth, CAIA**  
Senior Vice President

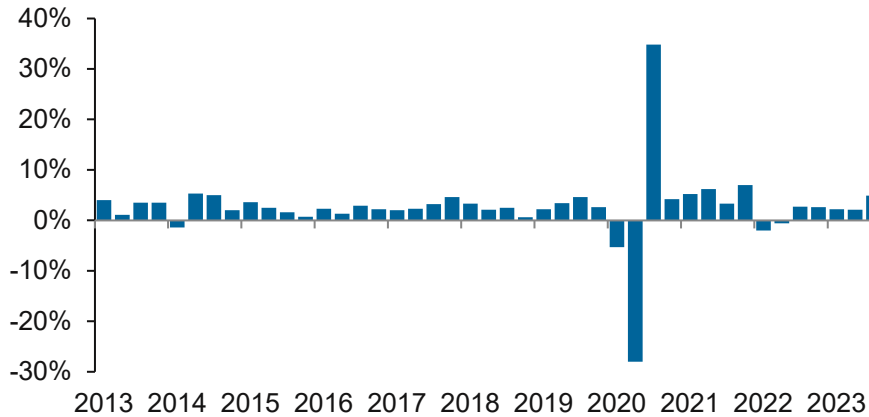
**John Jackson, CFA**  
Senior Vice President

Important Disclosures regarding the use of this document are included at the end of this document. These disclosures are an integral part of this document and should be considered by the user.

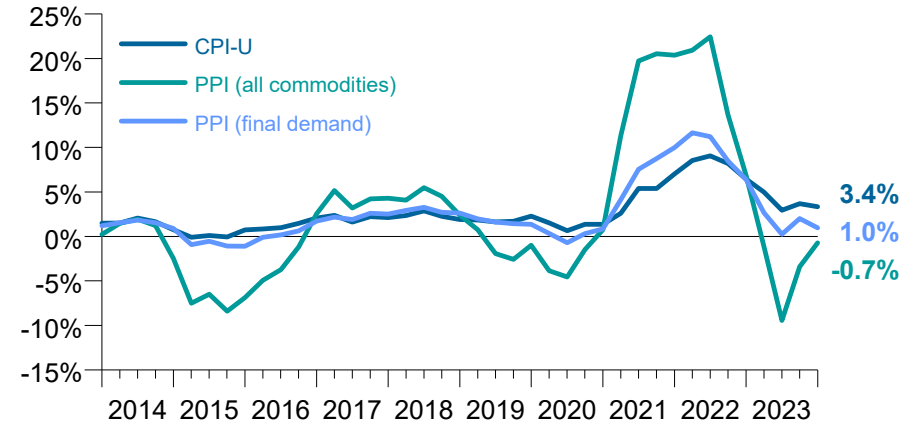
# U.S. Economy—Summary

For periods ended 12/31/23 (Except GDP which is as of 9/30/23)

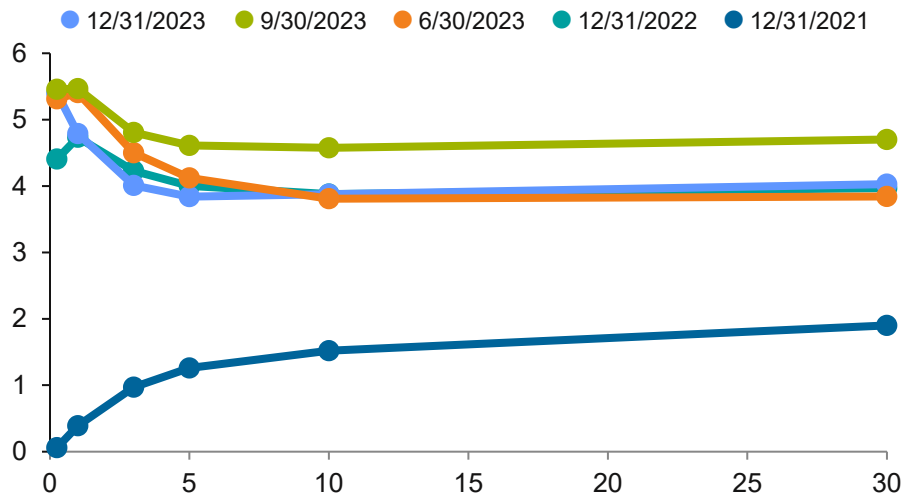
Quarterly Real GDP Growth



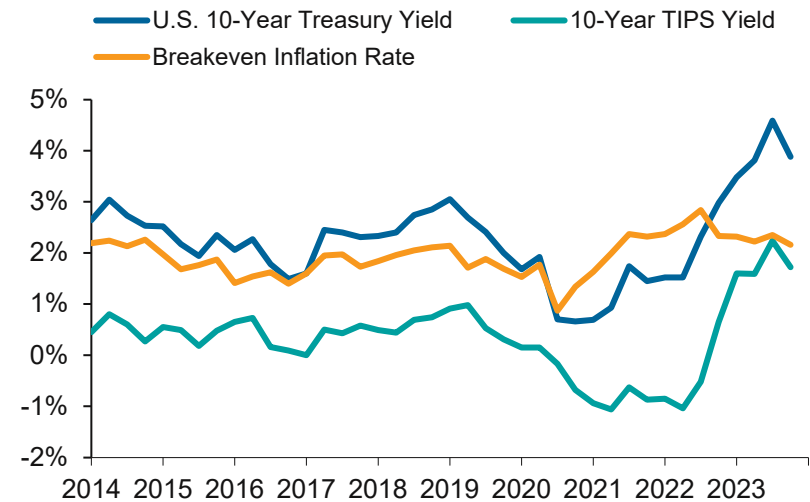
Inflation Year-Over-Year



U.S. Treasury Yield Curves



Historical 10-Year Yields Through 12/31/23



Sources: Bloomberg, Bureau of Labor Statistics, Callan

# Equity Markets Down in 3Q, Following Rebound in First Half of 2023

Stocks and bonds still have ground to make up after declines in 2022

## S&P 500 soared 11.7% in 4Q23

- Loss through first three quarters of 2022 was 23.9%; the rebound in the following five quarters brought the index back to a positive return of 1.7% over the past two years.

## Fixed income recovered in 4Q, up 6.8% after a sharp loss of 3.2% in 3Q

- The Bloomberg Aggregate was on track for another negative year through 3Q; softening Fed language on rates and a dot plot that showed cuts on the horizon in 4Q turned the market around.
- CPI-U declined in 4Q compared to 3Q, though up 3.4% year-over-year; the index is still 10% higher than it was at the start of 2022.

## Economic data defied expectations of recession in 2023

- GDP growth came in at 2.1% in 1Q, 2.2% in 2Q, and jumped to a stunning 4.9% in 3Q. Preliminary 4Q forecasts have GDP over 2%.
- Job market remains solid, providing support to Fed efforts to fight inflation.

## Returns for Periods ended 12/31/23

|                              | Quarter | 1 Year | 2 Years | 5 Years | 10 Years | 25 Years |
|------------------------------|---------|--------|---------|---------|----------|----------|
| <b>U.S. Equity</b>           |         |        |         |         |          |          |
| Russell 3000                 | 12.07   | 25.96  | 0.88    | 15.16   | 11.48    | 7.74     |
| S&P 500                      | 11.69   | 26.29  | 1.69    | 15.69   | 12.03    | 7.56     |
| Russell 2000                 | 14.03   | 16.93  | -3.55   | 9.97    | 7.16     | 7.91     |
| <b>Global ex-U.S. Equity</b> |         |        |         |         |          |          |
| MSCI World ex USA            | 10.51   | 17.94  | 0.54    | 8.45    | 4.32     | 4.62     |
| MSCI Emerging Markets        | 7.86    | 9.83   | -6.32   | 3.69    | 2.66     | --       |
| MSCI ACWI ex USA Small Cap   | 10.12   | 15.66  | -3.79   | 7.89    | 4.88     | 7.28     |
| <b>Fixed Income</b>          |         |        |         |         |          |          |
| Bloomberg Aggregate          | 6.82    | 5.53   | -4.19   | 1.10    | 1.81     | 3.85     |
| 90-day T-Bill                | 1.37    | 5.01   | 3.22    | 1.88    | 1.25     | 1.90     |
| Bloomberg Long Gov/Credit    | 13.24   | 7.13   | -11.62  | 1.12    | 3.22     | 5.21     |
| Bloomberg Global Agg ex-US   | 9.21    | 5.72   | -7.29   | -1.56   | -0.79    | 2.25     |
| <b>Real Estate</b>           |         |        |         |         |          |          |
| NCREIF Property*             | -1.37   | -8.39  | 3.12    | 5.26    | 7.40     | 8.31     |
| FTSE Nareit Equity           | 16.22   | 13.73  | -7.25   | 7.39    | 7.65     | 9.27     |
| <b>Alternatives</b>          |         |        |         |         |          |          |
| HFRI Fund Weighted           | 3.59    | 7.52   | 1.52    | 7.00    | 4.53     | 6.30     |
| Cambridge Private Equity*    | 1.60    | 2.78   | 3.19    | 15.18   | 14.78    | 13.61    |
| Bloomberg Commodity          | -4.63   | -7.91  | 3.40    | 7.23    | -1.11    | 2.83     |
| Gold Spot Price              | 11.02   | 13.45  | 6.44    | 10.09   | 5.59     | 8.19     |
| <b>Inflation - CPI-U</b>     | -0.34   | 3.35   | 4.89    | 4.07    | 2.79     | 2.54     |

\*Cambridge PE data as of 6/30/23; NCREIF Property data as of 9/30/23

Sources: Bloomberg, Callan, Cambridge, FTSE Russell, HFRI, MSCI, NCREIF, S&P Dow Jones Indices

# U.S. Equity Performance: 4Q23

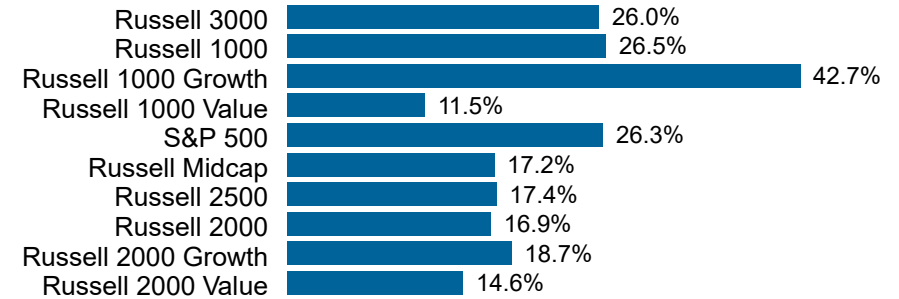
The U.S. equity market rallied in 4Q, closing the year near record highs

- ▶ U.S. equity markets rebounded in the last two months of the year as the impact of possible rate cuts in 2024 started to get priced in.
- ▶ 2023 saw the narrowest breadth of leadership (“the Magnificent Seven”) since 1987 with just 27% of stocks outperforming the S&P 500. Historically, such concentrated leadership has not been the sign of a healthy market. However, gains started broadening out in the last two months of the year with the equal-weighted S&P index outperforming the capitalization-weighted version.
- ▶ Smaller cap stocks also outperformed their large cap counterparts in 4Q23, further proof of the broadening out of returns; for the full year, large cap stocks outperformed small cap stocks by almost 10 percentage points.
- ▶ Growth vs. value performance was mixed across market capitalization during the quarter. Within large cap, growth outperformed value, while the opposite was true within small cap.

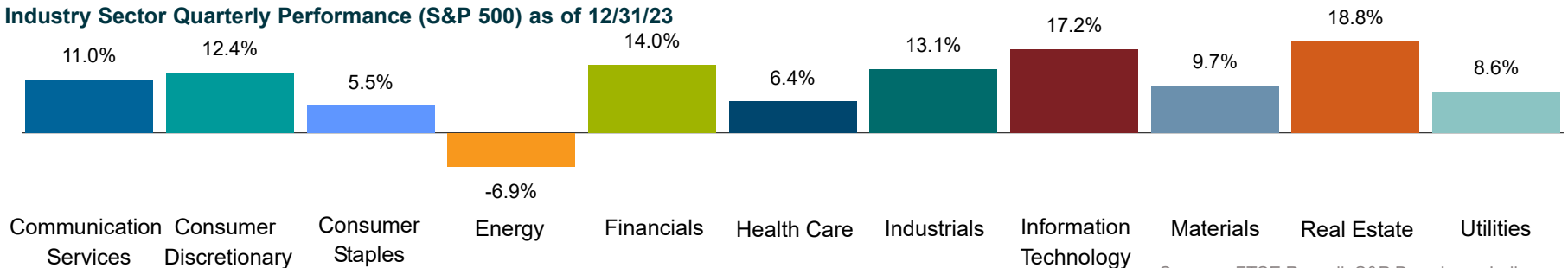
## U.S. Equity: Quarter Ended 12/31/23



## U.S. Equity: One Year Ended 12/31/23



## Industry Sector Quarterly Performance (S&P 500) as of 12/31/23



Sources: FTSE Russell, S&P Dow Jones Indices

# Global/Global ex-U.S. Equity Performance: 4Q23

Dovish central banks drove market higher

## Global markets in the black for 4Q

### Broad market

- ▶ Dovish signaling from central banks and dropping yields led to a broad market rally in 4Q.
- ▶ Global ex-U.S. small caps reclaimed some of their lagging performance in 4Q but ended the year as the worst-performing broad-based index, albeit up over 12%. Elevated borrowing costs and the persistent risk of a recession have kept investors away.
- ▶ Japan's low rates have benefited exporters, and the threat of being delisted spurred a stock buy-back spree. Coupled with an increased focus on governance, this spurred Japan to a multi-decade high.

### Emerging markets

- ▶ Emerging markets underperformed developed markets.
  - India's rally couldn't overcome China's weakness, whose economic growth was near the government's target, but investor concerns around stimulus and a surprisingly sluggish reopening drove stocks lower.

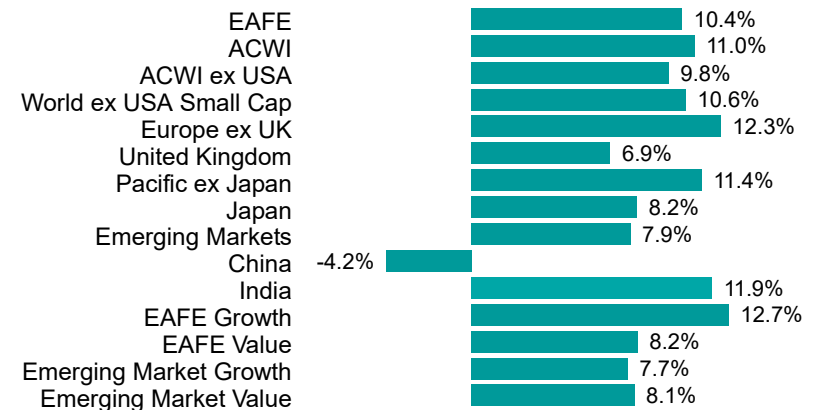
### Growth vs. value

- ▶ Energy, a volatile area in the market, pulled back value's rally after having a strong 3Q. Global ex-U.S. growth rallied on lowering yields but couldn't overcome earlier underperformance and ended the year behind its value peers in both emerging and developed markets.

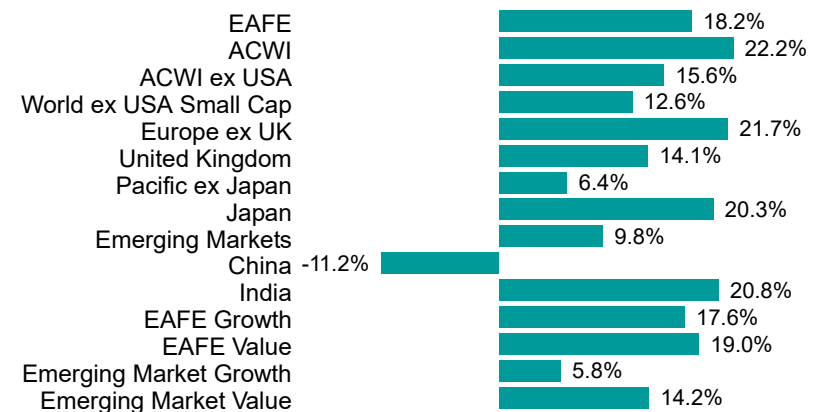
### U.S. dollar vs. other currencies

- ▶ The U.S. dollar weakened in 4Q as investors believed that U.S. interest rates would fall faster than much of the developed world.

Global Equity Returns: Quarter Ended 12/31/23



Global Equity Returns: One Year Ended 12/31/23



Source: MSCI

# U.S. Fixed Income Performance: 4Q23

Bonds bounce back at year-end; U.S. Treasury yield has volatile 2023

## Strong returns at end of year

- ▶ Driven by falling rates and strong risk-on sentiment, the Aggregate returned 6.8%, the highest quarterly return since 2Q89
- ▶ 10-year U.S. Treasury yield closed the year at 3.88%.
  - A round trip from 12/2022, masking significant volatility during the year
  - High was 4.98% in October and low was 3.30% in April
- ▶ Corporates and mortgages outperformed Treasuries for the quarter and year.
- ▶ High yield corporates soared as defaults remained low, economy resilient.

## U.S. Treasury yield curve remained inverted, but less so

- ▶ 1.06% as of 6/30; 0.44% as of 9/30; 0.35% as of 12/31

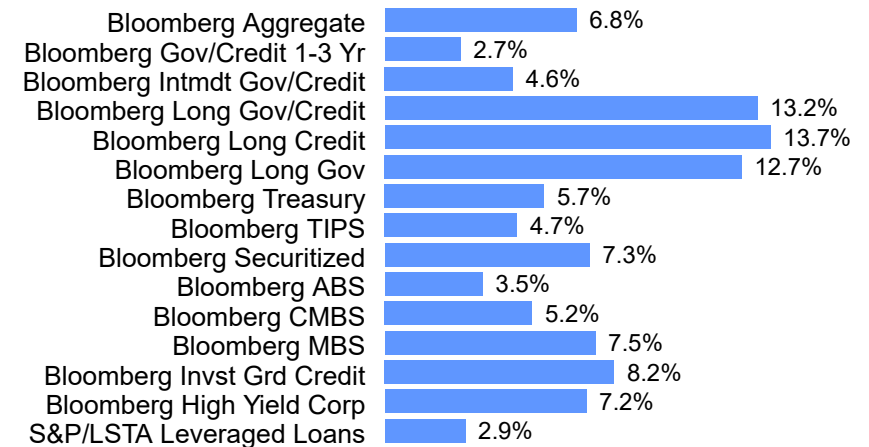
## Fed kept Fed Funds rate on hold and softened language

- ▶ Pivoted from “higher for longer” to projected rate cuts in 2024
- ▶ Inflation over past six months below Fed’s 2% target
  - Core PCE Price Index was 1.9% annualized in November
- ▶ Markets expect six rate cuts in 2024 versus three in the Fed’s Summary of Economic Projections

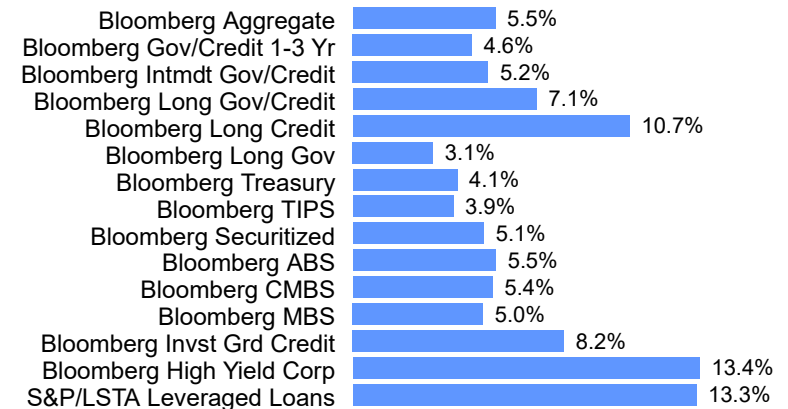
## Valuations

- ▶ Investment grade and high yield corporate spreads now below 10-year averages

## U.S. Fixed Income Returns: Quarter Ended 12/31/23



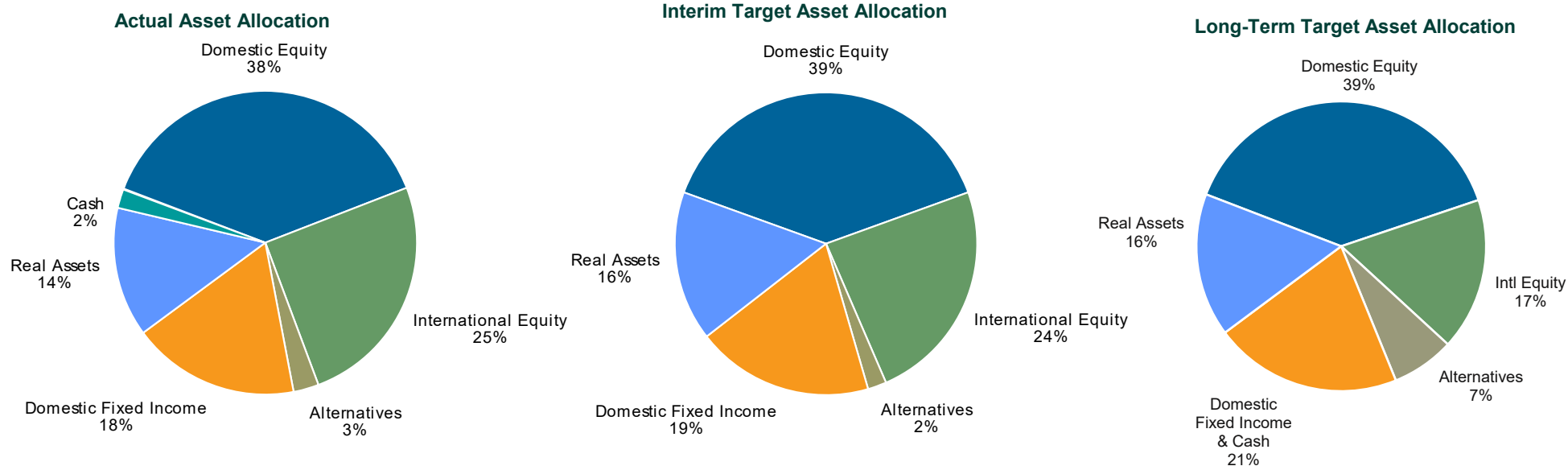
## U.S. Fixed Income Returns: One Year Ended 12/31/23



Sources: Bloomberg, Callan, S&P Dow Jones Indices

# Actual vs. Target Asset Allocation\*

December 31, 2023



| Asset Class           | \$Millions Actual | Weight Actual | Interim Target | Percent Difference | \$Millions Difference |
|-----------------------|-------------------|---------------|----------------|--------------------|-----------------------|
| Domestic Equity       | 4,210             | 38.3%         | 39.0%          | (0.7%)             | (75)                  |
| International Equity  | 2,772             | 25.2%         | 24.0%          | 1.2%               | 136                   |
| Alternatives          | 297               | 2.7%          | 2.0%           | 0.7%               | 78                    |
| Domestic Fixed Income | 1,971             | 17.9%         | 19.0%          | (1.1%)             | (116)                 |
| Real Assets           | 1,514             | 13.8%         | 16.0%          | (2.2%)             | (244)                 |
| Cash                  | 222               | 2.0%          | 0.0%           | 2.0%               | 222                   |
| <b>Total</b>          | <b>10,987</b>     | <b>100.0%</b> | <b>100.0%</b>  |                    |                       |

- The APERS Investment Policy states that rebalancing to the target asset allocation should take place when the actual asset allocation falls outside of a +/- 5% range from the target asset allocation. All asset classes are within their allowable ranges.

\*The long-term asset allocation was approved in 2023. The benchmark will be modified to reflect the new long-term targets when the Private Equity allocation has been implemented. Benchmark definitions can be found in the appendix.

# Investment Manager Asset Allocation

December 31, 2023

|                                  | December 31, 2023       |                |                        | September 30, 2023    |                         |                |
|----------------------------------|-------------------------|----------------|------------------------|-----------------------|-------------------------|----------------|
|                                  | Market Value            | Weight         | Net New Inv.           | Inv. Return           | Market Value            | Weight         |
| <b>Domestic Equity</b>           | <b>\$4,210,095,221</b>  | <b>38.32%</b>  | <b>\$(113,692,977)</b> | <b>\$451,706,938</b>  | <b>\$3,872,081,260</b>  | <b>37.78%</b>  |
| Lazard Asset Mgmt.               | 515,769,708             | 4.69%          | (350,465)              | 48,806,047            | 467,314,126             | 4.56%          |
| CastleArk Mgmt. LLC              | 539,241,659             | 4.91%          | (630,496)              | 65,540,526            | 474,331,629             | 4.63%          |
| Mellon S&P 500 Index Fd          | 706,243,433             | 6.43%          | (47,141,676)           | 74,222,329            | 679,162,779             | 6.63%          |
| Horrell Capital - Passive        | 222,716,373             | 2.03%          | (80,653)               | 24,295,494            | 198,501,532             | 1.94%          |
| Mellon Large Cap Growth          | 403,534,109             | 3.67%          | (36,012,250)           | 53,522,417            | 386,023,943             | 3.77%          |
| Wellington Management            | 504,284,506             | 4.59%          | (343,399)              | 46,136,103            | 458,491,802             | 4.47%          |
| Intech                           | 6,841                   | 0.00%          | (136)                  | 6,886                 | 91                      | 0.00%          |
| LSV Asset Management             | 405,198,854             | 3.69%          | (511,487)              | 49,802,358            | 355,907,983             | 3.47%          |
| Stephens Investment Mgmt.        | 503,136,917             | 4.58%          | (718,327)              | 56,967,128            | 446,888,117             | 4.36%          |
| Froley Revy Investment           | 409,962,821             | 3.73%          | (27,904,087)           | 32,407,651            | 405,459,257             | 3.96%          |
| <b>International Equity</b>      | <b>\$2,772,318,692</b>  | <b>25.23%</b>  | <b>\$(118,408,501)</b> | <b>\$267,296,929</b>  | <b>\$2,623,430,264</b>  | <b>25.60%</b>  |
| Artisan Partners                 | 701,189,707             | 6.38%          | (40,884,968)           | 68,924,644            | 673,150,031             | 6.57%          |
| Mellon ACWI ex US Fund           | 614,917,146             | 5.60%          | (25,069,398)           | 55,577,903            | 584,408,641             | 5.70%          |
| Baillie Gifford Overseas         | 511,680,219             | 4.66%          | (25,483,413)           | 54,636,091            | 482,527,541             | 4.71%          |
| Lazard Asset Mgmt.               | 577,523,904             | 5.26%          | (26,412,293)           | 53,829,403            | 550,106,793             | 5.37%          |
| Acadian ACW ex US SmallCap       | 202,568,446             | 1.84%          | (300,072)              | 18,288,157            | 184,580,361             | 1.80%          |
| Franklin Templeton Intl SmallCap | 164,439,270             | 1.50%          | (258,357)              | 16,040,731            | 148,656,896             | 1.45%          |
| <b>Alternatives</b>              | <b>\$297,452,917</b>    | <b>2.71%</b>   | <b>\$68,046,952</b>    | <b>\$5,789,535</b>    | <b>\$223,616,430</b>    | <b>2.18%</b>   |
| <b>Private Equity</b>            | <b>\$68,620,383</b>     | <b>0.62%</b>   | <b>\$68,620,383</b>    | <b>\$0</b>            | <b>-</b>                | <b>-</b>       |
| HarbourVest Dover XI             | 68,620,383              | 0.62%          | 68,620,383             | 0                     | -                       | -              |
| <b>Hedge Funds</b>               | <b>\$228,832,534</b>    | <b>2.08%</b>   | <b>\$(573,431)</b>     | <b>\$5,789,535</b>    | <b>\$223,616,430</b>    | <b>2.18%</b>   |
| Blackstone Alt. Asset Mgmt       | 228,832,534             | 2.08%          | (573,431)              | 5,789,535             | 223,616,430             | 2.18%          |
| <b>Domestic Fixed Income</b>     | <b>\$1,971,055,565</b>  | <b>17.94%</b>  | <b>\$(947,649)</b>     | <b>\$135,306,569</b>  | <b>\$1,836,696,646</b>  | <b>17.92%</b>  |
| DoubleLine Capital               | 622,225,206             | 5.66%          | (276,482)              | 40,336,153            | 582,165,535             | 5.68%          |
| MacKay Shields                   | 670,095,105             | 6.10%          | (309,223)              | 47,830,249            | 622,574,079             | 6.07%          |
| PGIM                             | 678,735,254             | 6.18%          | (361,945)              | 47,140,166            | 631,957,032             | 6.17%          |
| <b>Real Assets</b>               | <b>\$1,513,529,427</b>  | <b>13.78%</b>  | <b>\$121,828,816</b>   | <b>\$(51,508,175)</b> | <b>\$1,443,208,786</b>  | <b>14.08%</b>  |
| <b>REITS</b>                     | <b>\$12,516,715</b>     | <b>0.11%</b>   | <b>\$(1,356)</b>       | <b>\$1,758,731</b>    | <b>\$10,759,340</b>     | <b>0.10%</b>   |
| MCM EB DV Non-SL REIT Fd         | 12,516,715              | 0.11%          | (1,356)                | 1,758,731             | 10,759,340              | 0.10%          |
| <b>Core Real Estate</b>          | <b>\$875,471,077</b>    | <b>7.97%</b>   | <b>\$(3,639,326)</b>   | <b>\$(42,229,875)</b> | <b>\$921,340,278</b>    | <b>8.99%</b>   |
| Invesco Real Estate              | 542,477,789             | 4.94%          | (567,273)              | (26,438,397)          | 569,483,459             | 5.56%          |
| Heitman Real Estate Tr LP        | 332,993,288             | 3.03%          | (3,072,053)            | (15,791,478)          | 351,856,819             | 3.43%          |
| <b>Value Add Real Estate</b>     | <b>\$433,168,337</b>    | <b>3.94%</b>   | <b>\$121,432,389</b>   | <b>\$(12,311,488)</b> | <b>\$324,047,436</b>    | <b>3.16%</b>   |
| Carlyle Property Investors       | 85,000,000              | 0.77%          | 85,000,000             | 0                     | -                       | -              |
| Clarion Lion Industrial Trust    | 79,700,284              | 0.73%          | (245,590)              | (2,282,356)           | 82,228,230              | 0.80%          |
| Hamison Street Fund VIII         | 46,782,812              | 0.43%          | 2,357,023              | (54,919)              | 44,480,708              | 0.43%          |
| Heitman Value Partners IV        | 46,795,332              | 0.43%          | (2,427,643)            | 3,745,691             | 45,477,284              | 0.44%          |
| LaSalle Inc & Growth VI LP       | 5,443,416               | 0.05%          | 0                      | 436,849               | 5,006,567               | 0.05%          |
| LaSalle Inc & Growth VII LP      | 18,006,238              | 0.16%          | (86,502)               | (3,357,455)           | 21,450,195              | 0.21%          |
| Starwood SOF XII                 | 37,236,053              | 0.34%          | 22,263,635             | (1,849,086)           | 16,821,504              | 0.16%          |
| TA Realty XI                     | 3,389,536               | 0.03%          | (4,043,035)            | (1,341,709)           | 8,774,280               | 0.09%          |
| TA Realty XII                    | 95,320,167              | 0.87%          | 670,854                | (5,159,355)           | 99,808,668              | 0.97%          |
| TA Realty XIII                   | 15,494,499              | 0.14%          | 17,943,647             | (2,449,148)           | -                       | -              |
| <b>Farmland</b>                  | <b>\$94,835,372</b>     | <b>0.86%</b>   | <b>\$4,256,165</b>     | <b>\$875,062</b>      | <b>\$89,704,145</b>     | <b>0.88%</b>   |
| IFC Core Farmland Fund           | 52,620,404              | 0.48%          | (1,071,673)            | 1,099,456             | 52,592,621              | 0.51%          |
| PGIM Agriculture                 | 42,214,968              | 0.38%          | 5,327,838              | (224,394)             | 37,111,524              | 0.36%          |
| <b>Timber</b>                    | <b>\$97,537,927</b>     | <b>0.89%</b>   | <b>\$(219,055)</b>     | <b>\$399,395</b>      | <b>\$97,357,587</b>     | <b>0.95%</b>   |
| Pinnacle                         | 97,537,927              | 0.89%          | (219,055)              | 399,395               | 97,357,587              | 0.95%          |
| <b>Cash</b>                      | <b>\$222,204,567</b>    | <b>2.02%</b>   | <b>\$(29,720,757)</b>  | <b>\$1,749,765</b>    | <b>\$250,175,559</b>    | <b>2.44%</b>   |
| <b>Composite Fund</b>            | <b>\$10,986,656,389</b> | <b>100.00%</b> | <b>\$(72,894,116)</b>  | <b>\$810,341,561</b>  | <b>\$10,249,208,945</b> | <b>100.00%</b> |



# Asset Class Performance and Market Values

December 31, 2023

|                                | Market Value<br>\$(Dollars) | Ending Weight  | Last Quarter   | Fiscal YTD     | Last Year       | Last 3 Years   | Last 5 Years  |
|--------------------------------|-----------------------------|----------------|----------------|----------------|-----------------|----------------|---------------|
| <b>Domestic Equity</b>         | <b>\$4,210,095,221</b>      | <b>38.32%</b>  | <b>11.87%</b>  | <b>7.38%</b>   | <b>20.79%</b>   | <b>6.61%</b>   | <b>14.05%</b> |
| Russell 3000 Index             | -                           | -              | 12.07%         | 8.43%          | 25.96%          | 8.54%          | 15.16%        |
| <b>International Equity</b>    | <b>\$2,772,318,692</b>      | <b>25.23%</b>  | <b>10.43%</b>  | <b>5.23%</b>   | <b>17.86%</b>   | <b>2.11%</b>   | <b>9.06%</b>  |
| Benchmark**                    | -                           | -              | 9.81%          | 5.98%          | 15.62%          | 1.53%          | 6.61%         |
| <b>Alternatives</b>            | <b>\$297,452,917</b>        | <b>2.71%</b>   | <b>2.29%</b>   | <b>4.56%</b>   | <b>8.14%</b>    | <b>3.49%</b>   | <b>6.22%</b>  |
| <b>Private Equity</b>          | <b>\$68,620,383</b>         | <b>0.62%</b>   | -              | -              | -               | -              | -             |
| <b>Hedge Funds</b>             | <b>\$228,832,534</b>        | <b>2.08%</b>   | <b>2.59%</b>   | <b>4.87%</b>   | <b>7.42%</b>    | <b>6.42%</b>   | <b>6.47%</b>  |
| HFRI FOF: Diversified Index*** | -                           | -              | 2.92%          | 3.71%          | 8.06%           | 5.84%          | 5.69%         |
| <b>Domestic Fixed Income</b>   | <b>\$1,971,055,565</b>      | <b>17.94%</b>  | <b>7.37%</b>   | <b>4.51%</b>   | <b>7.87%</b>    | <b>(2.38%)</b> | <b>2.23%</b>  |
| Blmbg Aggregate                | -                           | -              | 6.82%          | 3.37%          | 5.53%           | (3.31%)        | 1.10%         |
| <b>Real Assets</b>             | <b>\$1,513,529,427</b>      | <b>13.78%</b>  | <b>(3.30%)</b> | <b>(4.75%)</b> | <b>(8.74%)</b>  | <b>8.55%</b>   | <b>6.17%</b>  |
| NCREIF Total Index****         | -                           | -              | (3.02%)        | (4.35%)        | 0.18%           | 7.11%          | 6.59%         |
| <b>REITS</b>                   | <b>\$12,516,715</b>         | <b>0.11%</b>   | <b>16.35%</b>  | <b>7.72%</b>   | <b>13.92%</b>   | <b>7.19%</b>   | <b>5.84%</b>  |
| S&P DJ US Select REIT          | -                           | -              | 16.35%         | 7.74%          | 13.96%          | 7.18%          | 6.12%         |
| <b>Core Real Estate</b>        | <b>\$875,471,077</b>        | <b>7.97%</b>   | <b>(4.60%)</b> | <b>(6.38%)</b> | <b>(11.75%)</b> | <b>5.47%</b>   | <b>3.99%</b>  |
| NFI-ODCE Eq Wt Net             | -                           | -              | (5.37%)        | (7.37%)        | (13.33%)        | 4.35%          | 3.78%         |
| <b>Value Add Real Estate</b>   | <b>\$433,168,337</b>        | <b>3.94%</b>   | <b>(2.79%)</b> | <b>(5.12%)</b> | <b>(10.64%)</b> | <b>13.81%</b>  | <b>12.14%</b> |
| NCREIF Total Index             | -                           | -              | (3.02%)        | (4.35%)        | (7.94%)         | 4.57%          | 4.33%         |
| <b>Farmland</b>                | <b>\$94,835,372</b>         | <b>0.86%</b>   | <b>0.98%</b>   | <b>0.98%</b>   | <b>5.68%</b>    | -              | -             |
| NCREIF Farmland Index          | -                           | -              | 2.27%          | 2.00%          | 4.96%           | 7.41%          | 6.01%         |
| <b>Timber</b>                  | <b>\$97,537,927</b>         | <b>0.89%</b>   | <b>0.41%</b>   | <b>5.16%</b>   | <b>16.47%</b>   | <b>13.98%</b>  | <b>7.28%</b>  |
| NCREIF Timberland Index        | -                           | -              | 4.34%          | 5.76%          | 9.45%           | 10.49%         | 6.62%         |
| <b>Cash</b>                    | <b>\$222,204,567</b>        | <b>2.02%</b>   | <b>1.29%</b>   | <b>2.51%</b>   | <b>4.90%</b>    | <b>2.22%</b>   | <b>1.90%</b>  |
| <b>Total Fund</b>              | <b>\$10,986,656,389</b>     | <b>100.00%</b> | <b>7.98%</b>   | <b>4.30%</b>   | <b>12.27%</b>   | <b>3.90%</b>   | <b>9.18%</b>  |
| <b>Total Fund ex Cash</b>      | <b>\$10,764,451,822</b>     | <b>97.98%</b>  | <b>8.06%</b>   | <b>4.32%</b>   | <b>12.33%</b>   | <b>3.91%</b>   | <b>9.22%</b>  |
| Benchmark*                     | -                           | -              | 7.93%          | 4.78%          | 14.98%          | 4.44%          | 9.27%         |

- **Domestic Equity** underperformed the benchmark in the fourth quarter and over the last 5-year period.
- **International Equity** outperformed the benchmark in the fourth quarter and exceeded the benchmark return over longer time periods.
- **Hedge Funds** trailed the index in the fourth quarter and leads the benchmark over longer time periods.
- **Domestic Fixed Income** outperformed the benchmark in the fourth quarter and leads the index over longer trailing time periods.
- **Farmland and Timber** underperformed their respective benchmarks for the quarter. The Timber allocation outpaced its benchmark over the last one-, three-, and five-year periods, and Farmland beat its benchmark over the last year.
- **Value Add Real Estate** outperformed its benchmark in the fourth quarter and over the trailing three- and five-year periods.
- **Core Real Estate** beat its benchmark return for the quarter and outperformed over longer periods.
- **REITS** performed in line with the benchmark for the quarter and modestly underperformed over the last five years.

\* Current Quarter Target = 39% Russell 3000 Index, 24% MSCI ACWI ex US IMI Index, 19% Blmbg Aggregate Index, 16% CPI All Urban Cons +4%, 3% MSCI World Index and 2% Blmbg Aggregate Index

\*\*\* MSCI EAFE through 12/31/2020; MSCI ACWI ex US IMI (Net) thereafter.

\*\*\*\* 60% MSCI World and 40% Bloomberg Aggregate through 6/30/2023; HFRI FOF: Diversified Index thereafter

\*\*\*\*\* CPI All Urban Consumers +4% through 6/30/2023; NCREIF Total Index thereafter

# Total Fund Performance

December 31, 2023

|   | Last Quarter     | Last Year         | Last 3 Years     | Last 5 Years     | Last 10 Years    | Last 20 Years    |
|---|------------------|-------------------|------------------|------------------|------------------|------------------|
| 10th Percentile   | 9.40             | 16.28             | 6.49             | 10.14            | 7.83             | 7.66             |
| 25th Percentile   | 8.55             | 14.33             | 5.38             | 9.55             | 7.41             | 7.38             |
| Median  | 7.93             | 12.99             | 4.26             | 8.97             | 6.90             | 7.16             |
| 75th Percentile   | 7.35             | 11.64             | 3.25             | 8.13             | 6.33             | 6.78             |
| 90th Percentile   | 6.58             | 10.66             | 2.14             | 7.50             | 5.91             | 6.42             |
| <span style="color: orange;">●</span> <b>Total Fund</b> | <b>7.98 (48)</b> | <b>12.27 (64)</b> | <b>3.90 (59)</b> | <b>9.18 (40)</b> | <b>6.91 (49)</b> | <b>7.24 (39)</b> |
| <span style="color: green;">●</span> <b>Benchmark</b>   | 7.93 (50)        | 14.98 (18)        | 4.44 (46)        | 9.27 (37)        | 6.97 (47)        | 7.20 (45)        |

- The above chart shows the distribution of returns for the Callan Public Fund DB Peer Group across time periods ended December 31, 2023. Returns longer than one year annualized.
- The returns and peer group ranking for the APERS Total Fund and Total Fund Target are shown in the bottom two rows.
  - **The 25th percentile return** represents the value above which 25% of the returns fall. In other words, it's the point where a quarter of the peer group earned a higher return, and three-quarters of the peer group earned a lower return.
  - **The median return** represents the middle value in a distribution of returns. If we arrange all the returns in ascending order, the median is the value that separates the lower half from the higher half.
  - **The 75th percentile return** represents the value above which 75% of the returns fall. In other words, it's the point where three-quarters of the peer group earned a higher return, and a quarter of the peer group earned a lower return.
- Over the last one- and three-year periods the Fund underperformed its benchmark and finished below its peer group median.
- Over the last 5- and 10-year periods, the Fund finished in line with the benchmark and outperformed its peer group median.
- For the trailing 20-year period, the Fund edged its benchmark return and ranked in the 39<sup>th</sup> percentile of its peer group.

*Current Quarter Target = 39% Russell 3000 Index, 24% MSCI ACWI ex US IMI Index, 19% Blmbg Aggregate Index, 16% NCREIF Total Index, 2% HFRI FOF: Diversified Index*

# Investment Manager Returns and Peer Group Rankings

December 31, 2023

|                           | Last Quarter  |           | Fiscal YTD   |           | Last Year     |           | Last 3 Years |           | Last 5 Years  |           |
|---------------------------|---------------|-----------|--------------|-----------|---------------|-----------|--------------|-----------|---------------|-----------|
| <b>Domestic Equity</b>    | <b>11.87%</b> | <b>48</b> | <b>7.38%</b> | <b>82</b> | <b>20.79%</b> | <b>85</b> | <b>6.61%</b> | <b>87</b> | <b>14.05%</b> | <b>71</b> |
| Russell 3000 Index        | 12.07%        | 33        | 8.43%        | 24        | 25.96%        | 14        | 8.54%        | 50        | 15.16%        | 21        |
| Pub Pln- Dom Equity       | 11.81%        |           | 8.02%        |           | 23.72%        |           | 8.54%        |           | 14.57%        |           |
| Lazard Asset Mgmt.        | 10.46%        | 67        | 1.54%        | 97        | 16.31%        | 69        | 6.27%        | 75        | 11.87%        | 82        |
| Russell 3000 Index        | 12.07%        | 41        | 8.43%        | 49        | 25.96%        | 29        | 8.54%        | 58        | 15.16%        | 40        |
| Callan All Cap Broad      | 11.48%        |           | 8.41%        |           | 20.75%        |           | 9.73%        |           | 14.68%        |           |
| CastleArk                 | 13.83%        | 12        | 8.70%        | 38        | 31.07%        | 24        | 8.42%        | 58        | 17.97%        | 10        |
| Russell 3000 Growth Index | 14.09%        | 11        | 10.28%       | 17        | 41.21%        | 7         | 8.08%        | 62        | 18.85%        | 7         |
| Callan All Cap Broad      | 11.48%        |           | 8.41%        |           | 20.75%        |           | 9.73%        |           | 14.68%        |           |
| Mellon S&P 500 Index Fd   | 11.68%        | 59        | 8.03%        | 82        | 26.28%        | 48        | 10.00%       | 58        | 15.36%        | 54        |
| S&P 500 Index             | 11.69%        | 58        | 8.04%        | 82        | 26.29%        | 48        | 10.00%       | 58        | 15.69%        | 50        |
| Callan Large Cap Core     | 11.88%        |           | 9.38%        |           | 26.16%        |           | 10.33%       |           | 15.69%        |           |
| Horrell Capital - Passive | 12.25%        | 40        | 7.77%        | 59        | 14.49%        | 70        | 11.96%       | 26        | 14.69%        | 47        |
| Bloomberg Arkansas Index  | 8.57%         | 89        | 11.38%       | 8         | 19.44%        | 55        | 24.10%       | 1         | 20.29%        | 3         |
| S&P 500 Index             | 11.69%        | 43        | 8.04%        | 55        | 26.29%        | 29        | 10.00%       | 44        | 15.69%        | 31        |
| Callan All Cap Broad      | 11.48%        |           | 8.41%        |           | 20.75%        |           | 9.73%        |           | 14.68%        |           |
| Mellon Large Cap Growth   | 14.22%        | 48        | 10.64%       | 43        | -             | -         | -            | -         | -             | -         |
| Russell 1000 Growth Index | 14.16%        | 51        | 10.59%       | 47        | 42.68%        | 35        | 8.86%        | 26        | 19.50%        | 10        |
| Callan Large Cap Growth   | 14.19%        |           | 10.49%       |           | 40.49%        |           | 6.74%        |           | 17.14%        |           |
| Wellington Management     | 10.07%        | 48        | 6.87%        | 75        | 14.45%        | 36        | 10.55%       | 63        | 12.52%        | 52        |
| Russell 1000 Value Index  | 9.50%         | 64        | 6.03%        | 85        | 11.46%        | 66        | 8.86%        | 90        | 10.91%        | 87        |
| Callan Large Cap Value    | 10.04%        |           | 7.60%        |           | 12.99%        |           | 11.11%       |           | 12.61%        |           |
| LSV Asset Management      | 14.02%        | 38        | 13.40%       | 27        | 18.99%        | 27        | 16.00%       | 15        | 13.46%        | 33        |
| Russell 2000 Value Index  | 15.26%        | 20        | 11.85%       | 41        | 14.65%        | 65        | 7.94%        | 81        | 10.00%        | 89        |
| Callan Small Cap Value    | 13.54%        |           | 10.95%       |           | 16.62%        |           | 11.09%       |           | 12.33%        |           |
| Stephens Investment Mgmt. | 12.78%        | 25        | 7.38%        | 7         | 20.30%        | 31        | 0.29%        | 33        | 11.69%        | 62        |
| Russell 2000 Growth Index | 12.75%        | 26        | 4.50%        | 35        | 18.66%        | 47        | (3.50%)      | 62        | 9.22%         | 86        |
| Callan Small Cap Growth   | 11.13%        |           | 3.87%        |           | 17.88%        |           | (1.53%)      |           | 12.21%        |           |
| Froley Revy Investment    | 8.10%         | 8         | 3.89%        | 38        | 8.40%         | 66        | (2.95%)      | 87        | 10.73%        | 35        |
| ML All Conv               | 6.67%         | 31        | 3.98%        | 37        | 12.87%        | 11        | (0.82%)      | 57        | 11.93%        | 18        |
| Callan Convert Bonds DB   | 6.01%         |           | 3.53%        |           | 9.13%         |           | (0.63%)      |           | 8.74%         |           |

- Total Domestic Equity underperformance over the last year has weighed on long-term results, as the composite trails the benchmark and peer group median over the trailing 3- and 5-year periods.
- Wellington, Stephens, and Froley Revy led their respective benchmarks for the quarter and ranked in the top half of their peer universe. Over the last five years, Stephens and Wellington outperformed their respective benchmarks while Froley Revy underperformed.
- CastleArk and Lazard underperformed their respective benchmarks for the fourth quarter. CastleArk trailed the benchmark over the last five years but ranked in the top quartile of peers. Lazard has underperformed the benchmark and its peer group median over longer periods.

# Investment Manager Returns and Peer Group Rankings

December 31, 2023

|                                  | Last Quarter  | Fiscal YTD   | Last Year     | Last 3 Years   | Last 5 Years |
|----------------------------------|---------------|--------------|---------------|----------------|--------------|
| <b>International Equity</b>      | <b>10.43%</b> | <b>5.23%</b> | <b>17.86%</b> | <b>2.11%</b>   | <b>9.06%</b> |
| Benchmark*                       | 9.81%         | 5.98%        | 15.62%        | 1.53%          | 6.61%        |
| Pub Pln- Intl Equity             | 9.70%         | 5.48%        | 16.51%        | 1.82%          | 8.11%        |
| Artisan Partners                 | 10.53%        | 7.66%        | 24.43%        | 11.48%         | 13.84%       |
| MSCI EAFE                        | 10.42%        | 5.88%        | 18.24%        | 4.02%          | 8.16%        |
| Callan NonUS Eq                  | 10.07%        | 5.09%        | 18.08%        | 3.36%          | 8.86%        |
| Mellon ACWI ex US Fund           | 9.73%         | 5.63%        | 15.95%        | 1.82%          | 7.40%        |
| MSCI ACWI ex US                  | 9.75%         | 5.61%        | 15.62%        | 1.55%          | 7.08%        |
| Callan NonUS Eq                  | 10.07%        | 5.09%        | 18.08%        | 3.36%          | 8.86%        |
| Baillie Gifford Overseas         | 11.62%        | 0.19%        | 11.55%        | (7.82%)        | 7.24%        |
| MSCI ACWIxUS Gross               | 9.82%         | 5.78%        | 16.21%        | 2.04%          | 7.60%        |
| Callan NonUS Eq                  | 10.07%        | 5.09%        | 18.08%        | 3.36%          | 8.86%        |
| Lazard Asset Mgmt.               | 10.05%        | 5.08%        | 19.17%        | 2.40%          | 7.69%        |
| MSCI ACWIxUS Gross               | 9.82%         | 5.78%        | 16.21%        | 2.04%          | 7.60%        |
| Callan NonUS Eq                  | 10.07%        | 5.09%        | 18.08%        | 3.36%          | 8.86%        |
| Acadian ACW ex US SmallCap       | 9.93%         | 8.45%        | 15.58%        | 7.57%          | -            |
| MSCI ACWI ex US Small Cap        | 10.12%        | 8.25%        | 15.66%        | 1.49%          | 7.89%        |
| Callan Intl Small Cap            | 10.88%        | 6.48%        | 15.06%        | (0.01%)        | 7.77%        |
| Franklin Templeton Intl SmallCap | 10.82%        | 6.83%        | 17.13%        | -              | -            |
| MSCI ACWI ex US Small Cap        | 10.12%        | 8.25%        | 15.66%        | 1.49%          | 7.89%        |
| Callan Intl Small Cap            | 10.88%        | 6.48%        | 15.06%        | (0.01%)        | 7.77%        |
| <b>Alternatives</b>              | <b>2.29%</b>  | <b>4.56%</b> | <b>8.14%</b>  | <b>3.49%</b>   | <b>6.22%</b> |
| <b>Hedge Funds</b>               | <b>2.59%</b>  | <b>4.87%</b> | <b>7.42%</b>  | <b>6.42%</b>   | <b>6.47%</b> |
| HFRI FOF: Diversified Index***   | 2.92%         | 3.71%        | 8.06%         | 5.84%          | 5.69%        |
| Blackstone Alt. Asset Mgmt.      | 2.59%         | 4.87%        | 7.42%         | 6.42%          | 6.47%        |
| HFRI FOF: Diversified Index***   | 2.92%         | 3.71%        | 8.06%         | 5.84%          | 5.69%        |
| Callan Core Diversif FoF         | 2.52%         | 3.99%        | 6.85%         | 3.65%          | 5.69%        |
| <b>Domestic Fixed Income</b>     | <b>7.37%</b>  | <b>4.51%</b> | <b>7.87%</b>  | <b>(2.38%)</b> | <b>2.23%</b> |
| Bimbg Aggregate Index            | 6.82%         | 3.37%        | 5.53%         | (3.31%)        | 1.10%        |
| Pub Pln- Dom Fixed               | 6.87%         | 3.94%        | 6.60%         | (2.23%)        | 2.04%        |
| DoubleLine Capital               | 6.93%         | 3.75%        | 7.11%         | (2.01%)        | 1.54%        |
| MacKay Shields                   | 7.69%         | 4.93%        | 8.20%         | (2.31%)        | 2.71%        |
| PGIM                             | 7.46%         | 4.79%        | 8.23%         | (2.80%)        | 2.37%        |
| Bimbg Aggregate Index            | 6.82%         | 3.37%        | 5.53%         | (3.31%)        | 1.10%        |
| Callan Core Plus FI              | 7.17%         | 4.03%        | 6.90%         | (2.52%)        | 2.23%        |

- **Total International Equity** outperformed the benchmark in the fourth quarter and has outpaced the benchmark over longer periods. The composite ranks in the 21<sup>st</sup> percentile of peers over the last five years.
- **Artisan, Baillie Gifford, Lazard, and Franklin Templeton** led their respective benchmarks for the quarter. Artisan, Lazard, Artisan, Baillie Gifford, and Lazard ranked in the top half of their peer groups. Over the 5-year period, Artisan and Lazard have outperformed their respective benchmarks. Baillie Gifford underperformed over the last five years.
- **Hedge Funds:** Blackstone underperformed the target for the quarter but has outpaced its target return and ranks in the top quartile of peers over the trailing 3- and 5-year periods.
- **Domestic Fixed Income** leads the index over the last 3- and 5-year periods. All three managers delivered excess returns over the benchmark in the fourth quarter and have outperformed over longer periods.

\*\* MSCI EAFE through 12/31/2020; MSCI ACWI ex US IMI (Net) thereafter.

\*\*\* 60% MSCI World and 40% Bloomberg Aggregate through 6/30/2023; HFRI FOF: Diversified Index thereafter

# Investment Manager Returns and Peer Group Rankings

December 31, 2023

|                                   | Last Quarter   | Fiscal YTD     | Last Year       | Last 3 Years  | Last 5 Years  |
|-----------------------------------|----------------|----------------|-----------------|---------------|---------------|
| <b>Real Assets</b>                | <b>(3.30%)</b> | <b>(4.75%)</b> | <b>(8.74%)</b>  | <b>8.55%</b>  | <b>6.17%</b>  |
| NCREIF Total Index****            | (3.02%)        | (4.35%)        | 0.18%           | 7.11%         | 6.59%         |
| <b>REITS</b>                      | <b>16.35%</b>  | <b>7.72%</b>   | <b>13.92%</b>   | <b>7.19%</b>  | <b>5.84%</b>  |
| S&P DJ US Select REIT             | 16.35%         | 7.74%          | 13.96%          | 7.18%         | 6.12%         |
| MCM EB DV Non-SL REIT Fd          | 16.35%         | 7.72%          | 13.92%          | 7.19%         | 5.84%         |
| S&P DJ US Select REIT             | 16.35%         | 7.74%          | 13.96%          | 7.18%         | 6.12%         |
| Callan Real Estate REIT           | 16.48%         | 8.08%          | 13.96%          | 6.79%         | 8.85%         |
| <b>Core Real Estate</b>           | <b>(4.60%)</b> | <b>(6.38%)</b> | <b>(11.75%)</b> | <b>5.47%</b>  | <b>3.99%</b>  |
| NCREIF NFI-ODCE Eq Wt Net         | (5.37%)        | (7.37%)        | (13.33%)        | 4.35%         | 3.78%         |
| Invesco Real Estate               | (4.64%)        | (6.13%)        | (12.14%)        | 4.64%         | 3.75%         |
| Heitman Real Estate Trust LP***** | (4.53%)        | (6.79%)        | (11.12%)        | 6.81%         | 4.42%         |
| NCREIF NFI-ODCE Eq Wt Net         | (5.37%)        | (7.37%)        | (13.33%)        | 4.35%         | 3.78%         |
| Callan OE Core Cmngld RE          | (0.22%)        | (2.08%)        | (8.63%)         | 5.52%         | 4.70%         |
| <b>Value Add Real Estate</b>      | <b>(2.79%)</b> | <b>(5.12%)</b> | <b>(10.64%)</b> | <b>13.81%</b> | <b>12.14%</b> |
| NCREIF Total Index                | (3.02%)        | (4.35%)        | (7.94%)         | 4.57%         | 4.33%         |
| Clarion Lion Industrial Trust     | (2.78%)        | (2.06%)        | (4.17%)         | -             | -             |
| Harrison Street Fund VIII         | (0.12%)        | 0.01%          | 15.86%          | -             | -             |
| Heitman Value Partners IV         | 8.59%          | 11.22%         | 1.02%           | 17.44%        | 14.99%        |
| LaSalle Inc & Growth VI LP        | 8.73%          | (1.89%)        | (7.68%)         | (13.25%)      | (8.92%)       |
| LaSalle Inc & Growth VII LP       | (15.71%)       | (35.98%)       | (51.12%)        | (11.30%)      | (5.40%)       |
| Starwood SOF XII                  | (4.73%)        | (1.80%)        | (3.19%)         | -             | -             |
| TA Associates Realty Fund XI      | (23.51%)       | (26.80%)       | (43.56%)        | (1.25%)       | 4.23%         |
| TA Associates Realty Fund XII     | (5.12%)        | (7.30%)        | (10.57%)        | 20.67%        | -             |
| NCREIF Total Index                | (3.02%)        | (4.35%)        | (7.94%)         | 4.57%         | 4.33%         |
| <b>Farmland</b>                   | <b>0.98%</b>   | <b>0.98%</b>   | <b>5.68%</b>    | <b>-</b>      | <b>-</b>      |
| IFC Core Farmland Fund            | 2.11%          | 3.29%          | 10.72%          | -             | -             |
| PGIM Agriculture                  | (0.61%)        | (2.18%)        | (1.55%)         | -             | -             |
| NCREIF Farmland Index             | 2.27%          | 2.00%          | 4.96%           | 7.41%         | 6.01%         |
| <b>Timber</b>                     | <b>0.41%</b>   | <b>5.16%</b>   | <b>16.47%</b>   | <b>13.98%</b> | <b>7.28%</b>  |
| Pinnacle                          | 0.41%          | 5.16%          | 16.47%          | 13.98%        | 7.28%         |
| NCREIF Timberland Index           | 4.34%          | 5.76%          | 9.45%           | 10.49%        | 6.62%         |
| <b>Cash</b>                       | <b>1.29%</b>   | <b>2.51%</b>   | <b>4.90%</b>    | <b>2.22%</b>  | <b>1.90%</b>  |
| <b>Total Fund</b>                 | <b>7.98%</b>   | <b>4.30%</b>   | <b>12.27%</b>   | <b>3.90%</b>  | <b>9.18%</b>  |
| Callan Public Fund Spr DB         | 7.93%          | 5.08%          | 12.99%          | 4.26%         | 8.97%         |
| <b>Total Fund ex Cash</b>         | <b>8.06%</b>   | <b>4.32%</b>   | <b>12.33%</b>   | <b>3.91%</b>  | <b>9.22%</b>  |
| Benchmark*                        | 7.93%          | 4.78%          | 14.98%          | 4.44%         | 9.27%         |
| Callan Public Fund Spr DB         | 7.93%          | 5.08%          | 12.99%          | 4.26%         | 8.97%         |

- The **Real Assets** composite underperformed its target for the third quarter and over the last year. REITS performed in line with the benchmark for the quarter, Core and Value Add Real Estate outperformed, and the Farmland and Timber allocations underperformed their benchmarks.
- The **Total Fund** outperformed its benchmark and ranked ahead of its peer group median for the quarter. The Fund ranked at the 59<sup>th</sup> percentile of peers and trailed the benchmark over the last 3-year period. Over the last 5 years, the Fund narrowly trailed its benchmark but ranked at the 40<sup>th</sup> percentile of its peer group.

\* Current Quarter Target = 39% Russell 3000 Index, 24% MSCI ACWI ex US IMI Index, 19% Blmbg Aggregate Index, 16% CPI All Urban Cons +4%, 3% MSCI World Index and 2% Blmbg Aggregate Index

\*\*\* MSCI EAFE through 12/31/2020; MSCI ACWI ex US IMI (Net) thereafter.

\*\*\* 60% MSCI World and 40% Bloomberg Aggregate through 6/30/2023; HFRI FOF: Diversified Index thereafter

\*\*\*\* CPI All Urban Consumers +4% through 6/30/2023; NCREIF Total Index thereafter

---

# Organizational Developments

*4<sup>th</sup> Quarter 2023*

## **CastleArk Management – Domestic Equity**

In December 2023, CastleArk's Internal Chief Compliance Officer, Rick Simek, notified the firm of his desire to leave the firm. CastleArk's Executive Committee discussed Simek's departure with internal and external counsel and made the decision to pursue ACA Global as an Outsourced Chief Compliance Officer as his replacement. ACA is a long-standing partner of CastleArk's, dating back more than 10 years. They have provided GIPS audit and other compliance advice to CastleArk over that time and were very familiar with the firm. ACA has been in the outsource OCCO business for some time but expanded significantly via their acquisitions of Foreside and Harden in the past few years. These firms were focused outsourced providers and allowed ACA to become the new industry heavyweight in these and other services. Chris Brancazio (ACA) is onboard as the OCCO and will with the dedicated internal resource—Sarah Johnson—to maintain a consistent feedback and module connectivity to the organization. Sarah's role in the firm is expanding from ESG and Execution into the Compliance Coordinator role. It is CastleArk's expectation that she will ultimately take the CCO role over in the coming years.

It is not unusual to see smaller firms outsource many areas including compliance given the increased costs. CastleArk has outsourced other functions such as middle/back office and cybersecurity in the past, so this is not the first external relationship for the firm. The SEC states that it's inappropriate not to have a named internal CCO so Callan will continue monitoring to verify that Sarah Johnson remains on track for that position in addition to her ESG duties

---

# Organizational Developments

*4<sup>th</sup> Quarter 2023*

## **Acadian Asset Management – International Equity**

On December 20, 2023, Acadian announced that CEO Ross Dowd was replaced by Chief Marketing Officer (CMO) Kelly Young. Ted Noon will become the new CMO. The change was not related to Acadian's performance or Ross's management ability but differing views on the future of Acadian's ownership. Kelly is a 15-year veteran at Acadian. She has been the Chief Marketing Officer since 2019, where she was responsible for Acadian's business development efforts. Ted Noon has been with Acadian since 2003, most recently focusing on North American Business Development.

We believe that Dowd's departure relates to his relationship with the BSIG's executive team and does not reflect on the firm, investment team, or strategies. As we have communicated in the past, and this event further solidifies, we believe the chance of a change of Acadian's ownership remains elevated.

## **Franklin Templeton – International Equity**

On January 1, 2024 Franklin completed the acquisition of Putnam from Great-West Lifeco, Inc. The Putnam equity teams will remain as distinct investment boutiques similar to previous acquired firms (ClearBridge, Brandywine, Western Asset). The Putnam Fixed Income & Multi-Asset teams will fold under FT Fixed Income and FT Investment Solutions.

Franklin was able to execute the acquisition of Legg Mason well providing confidence in this integration too. However, we will follow up if our opinion changes.

---

# Organizational Developments

*4<sup>th</sup> Quarter 2023*

## **Baillie Gifford – International Equity**

Baillie Gifford announced that on March 1st, the strategy's Portfolio Construction Group (PCG) will be expanding from five to six members with the addition of Alex Summers, an experienced Emerging Markets investor. At the same point, existing PCG members Iain Campbell and Joe Faraday will establish a dedicated central desk for the strategy, focusing on additional portfolio monitoring, construction, and complimentary research. Iain and Joe will now only be responsible for this strategy with no other regional or client servicing focused responsibilities. Efforts have been made to refine portfolio construction and risk oversight, aiming to strike a balance between high-growth, pre-profit companies and quality compounders.

Overall, while the changes seem incremental, Callan views the heightened focus on risk management to aid in the portfolio balance as a positive development.

## **Clarion Partners – Value-Add Real Estate**

On December 22, 2023, Clarion Partners announced that Dr. Tim Wang, Managing Director and Head of Investment Research, will retire at the end of December 2023 after nearly 18 years with the Firm. Dr. Wang joined Clarion in 2006 and became Head of Investment Research in 2012. In this role, he served as a member of both the equity and debt investment committees. The Research team, which already reports up to the Chief Investment Officer, Jeb Belford, will be led by Mr. Belford in the interim. Indraneel ("Indy") Karlekar, Ph.D. has joined Clarion Partners as a Managing Director and the Global Head of Research and Strategy. Indy will be a voting member of Clarion's Equity and Debt Investment Committees, and will be a member of Clarion's Executive Board. In his role, Mr. Karlekar is responsible for overseeing all facets of investment research in developing portfolio strategy, leveraging data analytics, and supporting capital raising and client service. Mr. Karlekar spent the last 10 years as the Global Head of Research and Portfolio Strategies for Principal Asset Management. He had also held senior research roles with ING Clarion Real Estate Securities between 2003 and 2011.

The announcement of Dr. Wang's retirement is notable but not actionable. Dr. Wang is highly regarded by the industry, including Callan's Real Assets Consulting team, but is supported by a strong team of nine dedicated research professionals, including several senior- and mid-level individuals.



---

# Work Plan Update

## Asset Liability Study

- Completed in February 2019. The Board decided to keep the current asset allocation unchanged

## Investment Policy Review and Update – Completed in August 2019

### Non-US Equity Structure Study

- The Board reviewed the Non-US Equity Structure Study at the November 2019 Board Meeting
- The Board selected a structure which included a new allocation to Non-US Small Cap Equity
- The Non-US Small Cap Equity search was concluded in November 2020 with the selection of Acadian Asset Management and Franklin Templeton Investments

### Real Assets Structure Study

- The Board reviewed the Real Assets Structure at the February 2021 meeting. The Board chose to eliminate the Energy equity allocation, in favor of additional Core and Core Plus real estate, and Farmland. Additional Allocations to Value-add real estate were also approved
- At the May 2021 Board Meeting, the Board approved the Real Estate Pacing Study and new commitments to Starwood and Harrison Street Partners
- At the November 2021 Board Meeting, Farmland managers were interviewed and both IFC and PGIM were allocated \$50 million.
- Core Plus Real Estate Manager Interviews occurred at the February Board Meeting, all three managers, Carlyle, Principal, and Clarion, were hired to manage \$85 million.

### Domestic Equity Structure Study

- Presented at the August 2022 Board Meeting. The Board decided to maintain the current Domestic Equity Structure.

### Private Equity Education and Total Fund Asset Allocation Review

- Private equity education was provided at the Trustee Workshop in October 2022. In the November 2022 meeting the Board received an asset allocation review which included portfolios containing private equity.
- The Board requested that Callan complete a Private Equity pacing analysis using a 5% private equity target allocation for the Fund.

---

## **Work Plan Update**

### **Total Fund Asset Allocation Review Update and Private Equity Pacing Study Analysis**

- Presented at the February 2023 meeting

### **Private Equity Education, Pacing Study Review**

- Additional Private Equity education provided on May 16<sup>th</sup>, 2023
- Private Equity Pacing Study results presented at the May 16<sup>th</sup>, 2023 meeting

### **Investment Policy Review**

- Approved in November 2023

### **Upcoming Projects:**

- **Fixed Income Structure Study**

# Total Fund Relative Attribution

December, 2023

## Relative Attribution Effects for Quarter ended December 31, 2023

| Asset Class           | Effective Actual Weight | Effective Target Weight | Actual Return | Target Return  | Manager Effect | Asset Allocation | Total Relative Return |
|-----------------------|-------------------------|-------------------------|---------------|----------------|----------------|------------------|-----------------------|
| Domestic Equity       | 37%                     | 39%                     | 11.87%        | 12.07%         | (0.08%)        | (0.07%)          | (0.14%)               |
| Domestic Fixed Income | 18%                     | 19%                     | 7.37%         | 6.82%          | 0.10%          | 0.01%            | 0.11%                 |
| International Equity  | 25%                     | 24%                     | 10.43%        | 9.81%          | 0.16%          | 0.02%            | 0.18%                 |
| Alternatives          | 3%                      | 2%                      | 2.29%         | 2.92%          | (0.02%)        | (0.03%)          | (0.04%)               |
| Real Assets           | 15%                     | 16%                     | (3.30%)       | (3.02%)        | (0.04%)        | 0.14%            | 0.10%                 |
| Cash                  | 2%                      | 0%                      | 1.29%         | 1.29%          | 0.00%          | (0.15%)          | (0.15%)               |
| <b>Total</b>          |                         |                         | <b>7.98%</b>  | <b>= 7.93%</b> | <b>+ 0.12%</b> | <b>+ (0.08%)</b> | <b>0.05%</b>          |

## Three Year Annualized Relative Attribution Effects

| Asset Class           | Effective Actual Weight | Effective Target Weight | Actual Return | Target Return  | Manager Effect   | Asset Allocation | Total Relative Return |
|-----------------------|-------------------------|-------------------------|---------------|----------------|------------------|------------------|-----------------------|
| Domestic Equity       | 39%                     | 37%                     | 6.61%         | 8.54%          | (0.74%)          | 0.04%            | (0.69%)               |
| Domestic Fixed Income | 17%                     | 18%                     | (2.38%)       | (3.31%)        | 0.16%            | 0.07%            | 0.23%                 |
| International Equity  | 25%                     | 24%                     | 2.11%         | 1.53%          | 0.15%            | (0.07%)          | 0.08%                 |
| Alternatives          | 4%                      | 5%                      | 3.49%         | 2.36%          | 0.07%            | 0.00%            | 0.07%                 |
| Real Assets           | 14%                     | 16%                     | 8.55%         | 7.11%          | 0.05%            | (0.22%)          | (0.18%)               |
| Cash                  | 1%                      | 0%                      | 2.22%         | 2.22%          | 0.00%            | (0.05%)          | (0.05%)               |
| <b>Total</b>          |                         |                         | <b>3.90%</b>  | <b>= 4.44%</b> | <b>+ (0.31%)</b> | <b>+ (0.23%)</b> | <b>(0.54%)</b>        |

## Five Year Annualized Relative Attribution Effects

| Asset Class           | Effective Actual Weight | Effective Target Weight | Actual Return | Target Return  | Manager Effect | Asset Allocation | Total Relative Return |
|-----------------------|-------------------------|-------------------------|---------------|----------------|----------------|------------------|-----------------------|
| Domestic Equity       | 39%                     | 37%                     | 14.05%        | 15.16%         | (0.42%)        | 0.07%            | (0.34%)               |
| Domestic Fixed Income | 17%                     | 18%                     | 2.23%         | 1.10%          | 0.17%          | 0.01%            | 0.17%                 |
| International Equity  | 25%                     | 24%                     | 9.06%         | 6.61%          | 0.61%          | (0.07%)          | 0.54%                 |
| Alternatives          | 4%                      | 5%                      | 6.22%         | 7.96%          | (0.08%)        | 0.00%            | (0.08%)               |
| Real Assets           | 14%                     | 16%                     | 6.17%         | 6.59%          | (0.20%)        | (0.11%)          | (0.31%)               |
| Cash                  | 1%                      | 0%                      | 1.90%         | 1.90%          | 0.00%          | (0.06%)          | (0.06%)               |
| <b>Total</b>          |                         |                         | <b>9.18%</b>  | <b>= 9.27%</b> | <b>+ 0.07%</b> | <b>+ (0.16%)</b> | <b>(0.09%)</b>        |

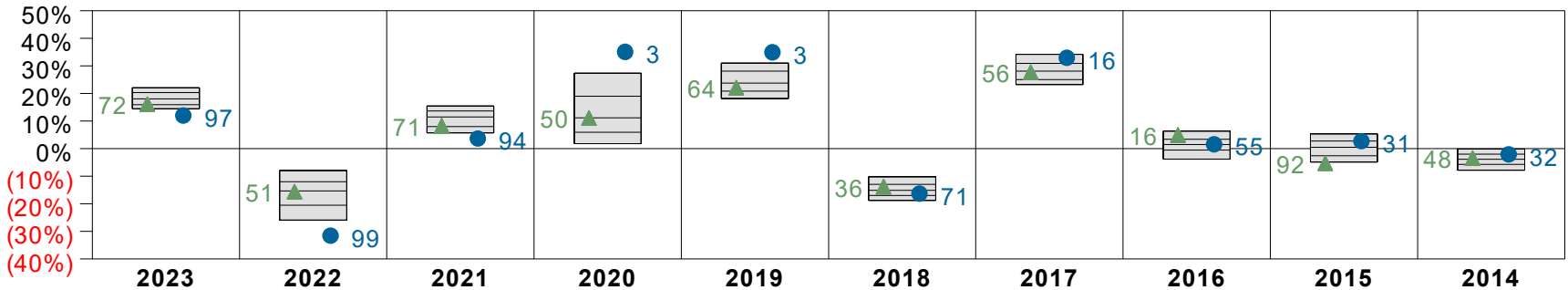
- 4<sup>th</sup> Quarter:** Active management added value for the quarter, particularly within Fixed Income and International Equity. Variance from policy weights had a modest negative impact, primarily due to an overweight to cash.
- Three Years:** Over the last three years, active management had a negative impact on relative performance overall. Domestic Equity managers were the largest detractor. The Fund benefited from an overweight to Domestic Equity and an underweight to Fixed Income, but an underweight to Real Assets and an overweight to International Equity were detractors.
- Five Years:** The Fund trailed its policy benchmark return over the last five years. Active management within International Equity and Fixed Income added value, while Domestic Equity and Real Assets managers were the primary detractors. Variance from target policy weights had a negative impact due to an underweight to Real Assets and overweights to Cash and International Equity.

Current Quarter Target = 39% Russell 3000 Index, 24% MSCI ACWI ex US IMI Index, 19% Blmbg Aggregate Index, 16% NCREIF Total Index, 2% HFRI FOF: Diversified Index

# Manager Spotlight

## Baillie Gifford

### Performance vs Callan Non-US Equity (Gross)



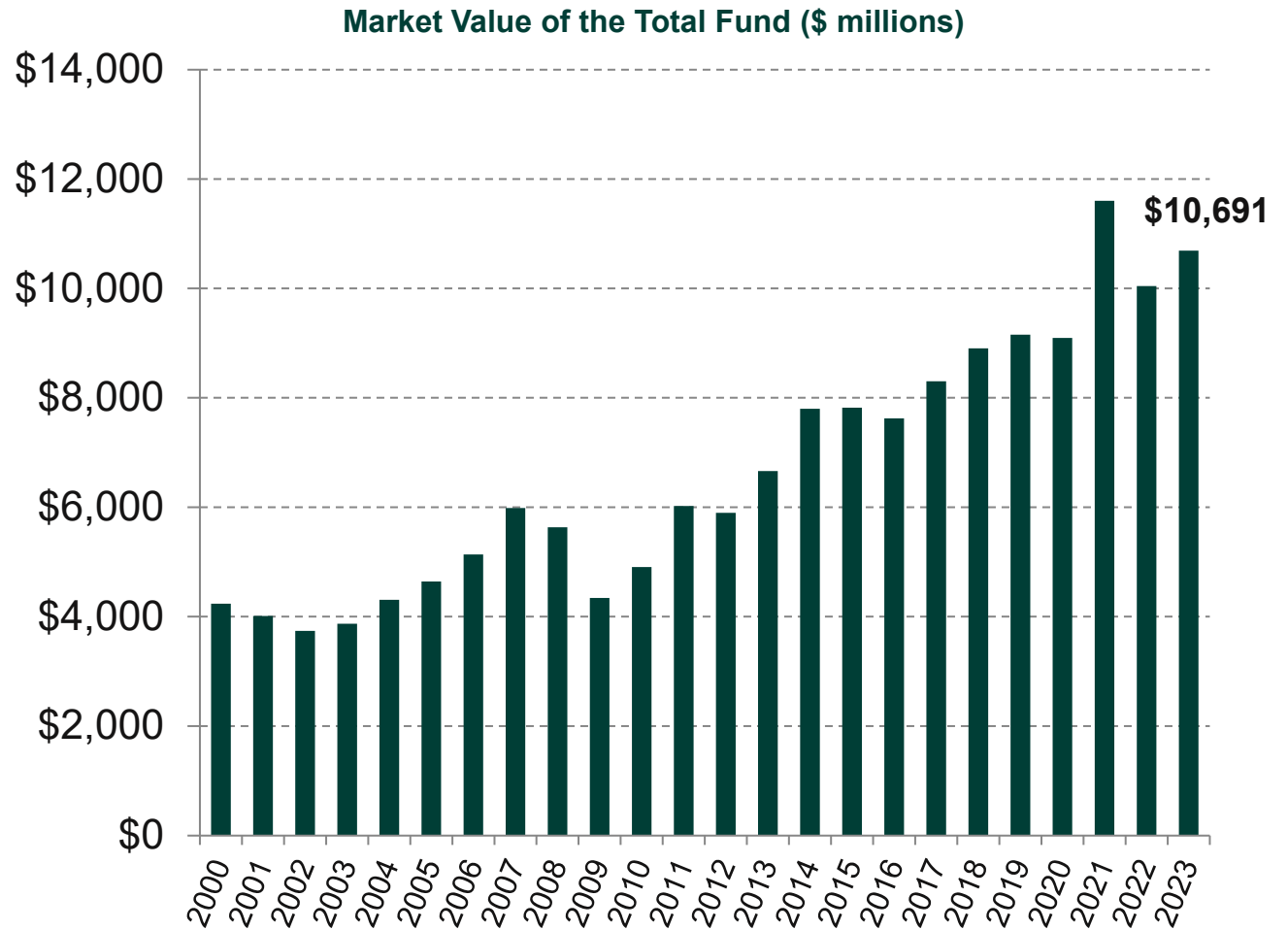
|                                 | 2023    | 2022    | 2021  | 2020  | 2019  | 2018    | 2017  | 2016   | 2015   | 2014   |
|---------------------------------|---------|---------|-------|-------|-------|---------|-------|--------|--------|--------|
| 10th Percentile                 | 22.05   | (7.90)  | 15.44 | 27.39 | 31.03 | (10.17) | 34.21 | 6.37   | 5.38   | (0.13) |
| 25th Percentile                 | 20.34   | (11.97) | 13.69 | 19.00 | 28.11 | (12.89) | 30.96 | 3.40   | 2.76   | (1.97) |
| Median                          | 18.08   | (15.29) | 11.50 | 11.19 | 23.78 | (15.12) | 28.16 | 1.50   | 0.54   | (3.85) |
| 75th Percentile                 | 15.93   | (20.51) | 7.98  | 5.93  | 20.88 | (17.01) | 25.08 | (0.47) | (2.53) | (5.70) |
| 90th Percentile                 | 14.48   | (25.95) | 5.73  | 1.81  | 18.19 | (18.73) | 23.28 | (3.82) | (4.89) | (7.82) |
| <b>Baillie Gifford Overseas</b> | ● 11.55 | (31.98) | 3.22  | 34.64 | 34.52 | (16.76) | 32.51 | 1.13   | 2.25   | (2.50) |
| MSCI ACWI xUS GD                | ▲ 16.21 | (15.57) | 8.29  | 11.13 | 22.13 | (13.77) | 27.77 | 5.01   | (5.25) | (3.44) |

- Baillie Gifford outperformed the benchmark and placed in the top third of its peer group in 5 of the last 10 full calendar years.
- Recently, Baillie Gifford has underperformed the benchmark and ranked in the bottom decile of peers in two consecutive calendar years. The strategy trailed the benchmark and ranked in the 97<sup>th</sup> percentile of its peer group in 2023 despite positive 4Q performance.
- Performance in 2023 struggled due to some key detractors:
  - Japan: a strong value market was a headwind, and several holdings were hurt by their exposure to Chinese consumers and regulations.
  - Consumer Discretionary: luxury goods and cosmetics companies struggled post-COVID as the reopening economy in China was weaker than expected.

# Historical Market Values of the Total Fund

## Fiscal Year-End Market Values

| Fiscal Year Ending | Market Value     |
|--------------------|------------------|
| 2000               | \$4,236,749,732  |
| 2001               | \$4,012,745,608  |
| 2002               | \$3,739,381,695  |
| 2003               | \$3,869,787,673  |
| 2004               | \$4,307,589,827  |
| 2005               | \$4,642,924,118  |
| 2006               | \$5,136,985,259  |
| 2007               | \$5,985,111,493  |
| 2008               | \$5,633,155,289  |
| 2009               | \$4,341,419,711  |
| 2010               | \$4,907,734,835  |
| 2011               | \$6,022,965,592  |
| 2012               | \$5,896,862,618  |
| 2013               | \$6,662,631,673  |
| 2014               | \$7,800,291,923  |
| 2015               | \$7,820,289,128  |
| 2016               | \$7,624,665,446  |
| 2017               | \$8,301,352,120  |
| 2018               | \$8,904,393,859  |
| 2019               | \$9,153,121,783  |
| 2020               | \$9,093,497,703  |
| 2021               | \$11,602,695,185 |
| 2022               | \$10,042,629,672 |
| 2023               | \$10,691,261,784 |



# Benchmark Definitions

1. **Total Fund Benchmark (Target):** Blend of asset class benchmarks at policy weights. The Long-Term Target was established in July 2023; however, the benchmark will be modified in accordance with the actual implementation. This process reflects the practical implementation of the strategic long-term asset allocation.

|                            | <b>Long-Term<br/>Target</b> | <b>4Q 2023<br/>Target</b> |
|----------------------------|-----------------------------|---------------------------|
| <b>Russell 3000</b>        | <b>39.0%</b>                | <b>39.0%</b>              |
| <b>MSCI ACWI xUS IMI</b>   | <b>17.0</b>                 | <b>24.0</b>               |
| <b>Bloomberg Aggregate</b> | <b>21.0</b>                 | <b>19.0</b>               |
| <b>Real Assets</b>         | <b>16.0</b>                 | <b>16.0</b>               |
| <b>Alternatives</b>        | <b>7.0</b>                  | <b>2.0</b>                |
| - Private Equity           | 5.0                         | 0.0                       |
| - Hedge Funds              | 2.0                         | 2.0                       |
| <b>Total Target</b>        | <b>100.0%</b>               | <b>100.0%</b>             |

2. **Domestic Equity Benchmark:** Russell 3000 Index
3. **International Equity Benchmark:** MSCI ACWI xUS IMI Index; Prior to 12/31/2020 MSCI EAFE Index
4. **Fixed Income Benchmark:** Bloomberg Aggregate Index
5. **Real Assets:** NCREIF Property Index; Prior to 7/1/2023 CPI All Urban Consumers + 4%
6. **Private Equity:** Russell 3000 Index +3%
7. **Hedge Funds:** HFRI Diversified Index; Prior to 7/1/2023 60% MSCI World and 40% Bloomberg Aggregate.

---

## Important Disclosures

Information contained in this document may include confidential, trade secret and/or proprietary information of Callan and the client. It is incumbent upon the user to maintain such information in strict confidence. Neither this document nor any specific information contained herein is to be used other than by the intended recipient for its intended purpose.

The content of this document is particular to the client and should not be relied upon by any other individual or entity. There can be no assurance that the performance of any account or investment will be comparable to the performance information presented in this document.

Certain information herein has been compiled by Callan from a variety of sources believed to be reliable but for which Callan has not necessarily verified for accuracy or completeness. Information contained herein may not be current. Callan has no obligation to bring current the information contained herein.

Callan's performance measurement service reports returns for a portfolio and compares them against relevant benchmarks and peer groups, as appropriate; such service may also report on historical portfolio holdings, comparing them to holdings of relevant benchmarks and peer groups, as appropriate ("portfolio holdings analysis"). To the extent that Callan's performance measurement service includes portfolio holdings analysis, Callan relies entirely on holdings data provided by third parties including custodian banks, record keepers and investment managers. Callan reports the performance and holdings data as received and does not attempt to audit or verify the holdings data. Callan is not responsible for the accuracy or completeness of the performance or holdings data received from third parties and such data may not have been verified for accuracy or completeness. Callan does not perform forward-looking risk analysis or guideline compliance analysis based on the performance or portfolio holdings data.

In no event should performance measurement service provided by Callan be used in the calculation, deliberation, policy determination, or any other action of the client as it pertains to determining contribution or funding amounts, timing or activity, benefit payments or distribution amounts, timing or activity, or performance-based fee amounts, timing or activity.

The content of this document may consist of statements of opinion, which are made as of the date they are expressed and are not statements of fact. The opinions expressed herein may change based upon changes in economic, market, financial and political conditions and other factors. Callan has no obligation to bring current the opinions expressed herein.

The information contained herein may include forward-looking statements regarding future results. The forward-looking statements herein: (i) are best estimations consistent with the information available as of the date hereof and (ii) involve known and unknown risks and uncertainties. Actual results may vary, perhaps materially, from the future results projected in this document. Undue reliance should not be placed on forward-looking statements.

Callan is not responsible for reviewing the risks of individual securities or the compliance/non-compliance of individual security holdings with a client's investment policy guidelines.

This document should not be construed as legal or tax advice on any matter. You should consult with legal and tax advisers before applying any of this information to your particular situation.

Reference to, or inclusion in this document of, any product, service or entity should not necessarily be construed as recommendation, approval, or endorsement of such product, service or entity by Callan. This document is provided in connection with Callan's consulting services and should not be viewed as an advertisement of Callan, or of the strategies or products discussed or referenced herein.

The issues considered and risks highlighted herein are not comprehensive and other risks may exist that the user of this document may deem material regarding the enclosed information. Please see any applicable full performance report or annual communication for other important disclosures.

Unless Callan has been specifically engaged to do so, Callan does not conduct background checks or in-depth due diligence of the operations of any investment manager search candidate or investment vehicle, as may be typically performed in an operational due diligence evaluation assignment and in no event does Callan conduct due diligence beyond what is described in its report to the client.

Any decision made on the basis of this document is sole responsibility of the client, as the intended recipient, and it is incumbent upon the client to make an independent determination of the suitability and consequences of such a decision.

Callan undertakes no obligation to update the information contained herein except as specifically requested by the client.

Past performance is no guarantee of future results.